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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/950,054      | 09/12/2001  | Atsushi Ooyama       | 011187              | 8671             |

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EXAMINER

MULLINS, BURTON S

ART UNIT PAPER NUMBER

2834

DATE MAILED: 11/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/950,054

Applicant(s)

OOYAMA ET AL.

Examiner

Burton S. Mullins

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5&6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statements submitted on September 12, 2001 and October 23, 2002 have been considered by the examiner. The German abstract lacks a date and therefore does not comply with 37 CFR 1.98(a).

### *Drawings*

3. Figures 10-11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

4. The disclosure is objected to because of the following informalities: On p.1, line 8, "so as for the rotator to be..." is not idiomatic. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, recitation "a position detection plane" is vague and indefinite. Does this refer to a position detection disk? Similar recitations of "plane" appear in claims 2 and 4. In claim 4, recitation "at which the displacement sensors are disposed" is vague and indefinite and lacks a clear antecedent. Recitation "the concave and/or the convex are disposed..." is improper grammar. In claim 5, recitation "provided in the rotator" lacks a clear antecedent. In claim 7, recitation "each disposed in outside of the axial electromagnet" is vague and indefinite.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Manabu (Japanese Pat.No. 2-287263). The prior art (specification, pp.1-3; Figs.10-11) teaches a magnetic levitation rotating machine for

supporting a rotator R in a levitated state by magnetic force of an electromagnet or a permanent magnet, said magnetic levitation rotating machine comprising: a position detection plane (speed detection disk 17) provided in the rotator eddy current displacement sensors 13 and 14 provided on a fixed side, for detecting axial and radial displacement of the plane (p.2, lines 16-23), and a detection mechanism (sensor signal processors 23 and 26) for detecting the displacement of the rotator and a rotating speed of the rotator from an output of the displacement sensors 13 and 14.

The machine of the prior art does not teach that the speed detection disk comprises "a concave and/or a convex provided therein;"

Manabu teaches an eddy current displacement sensor comprising a rotating disk 1 having either recessed (concave) or protruding (convex) parts 3 and 9 (Figs.2&4) facing a sensor 4 and including a pulse detection circuit 6 for determining rotation and improving the freedom of mounting position (abstract).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the prior art and provide a rotational sensor comprising a disk with concave or convex portions per Manabu since this would have been a desirable means to determine rotation and improve freedom of the mounting position.

#### *Allowable Subject Matter*

9. Claims 2 and 4-7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not teach that the

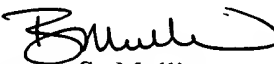
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displacement of the rotator is detected by extracting the displacement of the plane from the output of the displacement sensor, with the component representing the concave or the convex removed therefrom (claim 2); or at least one pair of the displacement sensors disposed at an arbitrary angle to the center of rotation of the rotator with the detection plane disposed to face the displacement sensors and the concave and/or convex disposed to correspond to the positions of the displacement sensors at the same angle as the arbitrary angle the sensors are displaced with respect to the center of rotation of the plane, with the position displacement and rotating speed computed from the outputs of the at least one pair of the displacement sensors and output to detect the displacement of the rotator and the rotating speed of the rotator (claim 4); or that the detection plane is disposed in a thrust disk formed of a magnetic material, wherein the thrust disk is controlled by an electromagnet for axial levitation position control of the rotator (claim 5).

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.

  
Burton S. Mullins  
Primary Examiner  
Art Unit 2834

bsm  
November 20, 2002